

**EVALUATION OF IIMS EDUCATION AND TRAINING AND
HEALTH PROFESSIONALS' EXPERIENCE OF WEB-BASED IIMS
TRAINING FOR INCIDENT REPORTING**

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**A thesis submitted in accordance with the partial fulfilment
for admission to the
Degree of Master of Health Services (Honours)**

**Faculty of Nursing, Midwifery and Health
University of Technology, Sydney
November 2009**

CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

 Ehambarashwar

Signature of candidate



“Dedicated to patients who have endured harm or lost their lives
due to incidents”

ACKNOWLEDGEMENTS

I would like to thank my supervisors, Professors Mary Chiarella and Jeffrey Braithwaite for their support and direction they provided me with throughout the duration of this research. Their guidance and encouragement were crucial to the successful completion of this endeavour.

I would also like to acknowledge: the support provided by the director of clinical governance at the AHS where this research was conducted; Jo Travaglia at the Centre for Clinical Governance Research in Health; the contributions made by the IIMS managers; and most importantly the contributions made by health professionals. I also thank the external stakeholders for their contribution. I would like to acknowledge NSW Health, the metropolitan AHS, the University of Technology Sydney and the Centre for Clinical Governance Research in Health at University of New South Wales for allowing me to undertake this research.

I am grateful to my husband and my mother for their enormous support, to my beloved children Harish and Swathi for their patience throughout the duration of this venture. Finally, I would like to thank Karen Gill for her unfailing support.

NOTE TO READERS ABOUT THE MASTER OF HEALTH SERVICES (HONOURS) PROGRAM AT THE UNIVERSITY OF TECHNOLOGY, SYDNEY (UTS)

The UTS Master of Health Services (Honours) degree provides the opportunity for health service professionals to develop and extend research skills through a program of structured study and research. The structured study includes three course work subjects on research methods that enhances the research skills of health services researchers, focuses on health policy and increases the international focus of health services research in Australia. The research component enables: informed participation in research endeavours and health services improvement within an international context; and facilitates health professionals to research health policy issues in a systematic manner through a program of supervised research. The outcome of this research is displayed in a scholarly way by means of this thesis. An additional piece of scholarly work, a report titled 'Evaluation of the Incident Information Management System in New South Wales: Study No. 2 – Review of the education and training program' was submitted to NSW Health as part of the evaluation of the IIMS in NSW (Ekambareshwar, Travaglia, Braithwaite, & Westbrook, 2006) (Appendix 4). That contribution was one of ten reports of the evaluation of the Incident Information Management System (IIMS) conducted by the Centre for Clinical Governance Research in Health (CCGR), University of New South Wales.

ABSTRACT

Evaluation of IIMS education and training and Health Professionals' experience of web-based IIMS training for incident reporting

The study of a State-wide electronic incident management system such as the Incident Information Management System (IIMS) in New South Wales (NSW) and electronic reporting of incidents is a relatively under-researched area. Educating health professionals in incident reporting is critical to the success of electronic incident reporting systems. Web-based training for IIMS incident reporting was introduced to NSW Public Health Organisations (PHOs) in 2004 as the main mode of training for IIMS. In this study, training programs provided in the use of IIMS were reviewed and health professionals' perceptions of web-based IIMS training were explored. This study was undertaken at a metropolitan Area Health Service (AHS) in NSW.

Data were collected, analysed and triangulated from the following sources: participant observation of IIMS face-to-face training; interviews with key stakeholders of IIMS; analysis of web-based IIMS training and video training material; log-file analysis of IIMS training database; administration of a purpose-built questionnaire to health professionals who undertook web-based IIMS training; and interviews with non-participants of web-based IIMS training.

Although web-based training is the official training program to educate health professionals to report incidents into the electronic IIMS, training was delivered through other media such as face-to-face presentations and video. Evaluation of the training programs reveals that training programs were well structured and

highly regarded by health professionals in the metropolitan AHS where this study was conducted. However, questionnaire data show that: health professionals prefer a blended training package; training has not had a significant impact on reporting of incidents; and training has not contributed to an increase in the number of incidents reported in the metropolitan AHS where this study was conducted.

The study uncovered low attendance numbers at web-based IIMS training and its under-utilisation. Both the web-based IIMS training attendance numbers and the incident notification numbers on IIMS imply that: nursing and midwifery health professionals have the highest attendance numbers and are the major reporters of incidents on IIMS and; it is difficult to involve medical professionals to participate in patient safety initiatives and to undertake training for such activities. Reporting of incidents by medical health professionals is vital since many incidents are beyond the scope of nursing health professionals.

In conclusion, health professionals working in PHOs play a key role in the adoption of the electronic IIMS incident reporting system and reporting of incidents into the system. It will be imperative to increase the computer self-efficacy of all health professionals for the success of this and future web-based training programs; and to increase awareness of incident reporting systems and training programs particularly for IIMS incident reporting. Health systems will benefit by integrating training on information technology and data systems into both pre- and post- registration curricula for all health professionals.

TABLE OF CONTENTS

CERTIFICATE OF AUTHORSHIP/ORIGINALITY	ii
ACKNOWLEDGEMENTS	iv
NOTE TO READERS ABOUT THE MASTER OF HEALTH SERVICES (HONOURS) PROGRAM AT THE UNIVERSITY OF TECHNOLOGY, SYDNEY (UTS).....	v
ABSTRACT	vi
TABLE OF CONTENTS	viii
LIST OF TABLES	xii
LIST OF FIGURES	xiv
ABBREVIATIONS	xvi
GLOSSARY OF TERMS	xviii
CHAPTER ONE: INTRODUCTION	1
1.1 The Research Task	1
1.2 Purpose of Incident Information Management Systems	1
1.3 Purpose of training for incident reporting	2
1.4 Rationale for the study	4
1.5 Evaluation of IIMS training programs and web-based IIMS training	4
1.6 Major aims of the study	5
1.7 Research questions	5
1.8 Study location	5
1.9 Thesis structure	6
CHAPTER TWO: LITERATURE REVIEW	7
2.1 Introduction	7
PART ONE: SAFETY AND QUALITY IN HEALTHCARE	8
2.2 Overview of literature on safety and quality in healthcare	8
2.3 Overview of Literature on Incidents	9
2.3.1 Cost implications of incidents	12
2.4 Systems approach to Patient Safety	13
2.5 Organisational and Safety Culture	15
2.6 Inquiries in Healthcare	17
2.6.1 The Special Commission of Inquiry into Campbelltown and Camden Hospitals 2000-2002	21

2.7	Patient safety initiatives	22
2.7.1	Key Patient Safety Initiatives in New South Wales	25
2.8	Incident reporting in Healthcare	29
2.8.1	Incident Reporting Systems in Healthcare	30
2.9	Introduction of the Incident Information Management System (IIMS) in New South Wales	32
2.10	Conclusion	34
PART TWO: TRAINING FOR INCIDENT REPORTING		35
2.11	Introduction	35
2.12	Web-based training for incident reporting in healthcare	36
2.12.1	Outstanding characteristics of web-based training	39
2.12.2	Drawbacks of web-based training	43
2.12.3	Learners' Attitude to web-based training	45
2.12.4	Computer competence of health professionals	46
2.13	Evaluation of web-based training	48
2.14	The Research Deficit	53
2.15	Conclusion	54
CHAPTER THREE: RESEARCH METHODS		56
3.1	Introduction	56
3.2	Study Design and Implementation	57
3.3	Familiarisation with the Study Setting	59
3.3.1	Quality and Safety initiatives at the tertiary referral hospital	59
3.4	Familiarisation with the Training Programs	61
3.5	Ethical Considerations	62
3.6	Qualitative Data Collection	63
3.7	Phase One Data Collection	65
3.7.1	Informal Interviews	65
3.7.1.1	<i>Interview with the Director of Clinical Governance at the metropolitan AHS</i>	<i>65</i>
3.7.1.2	<i>Interview with the IIMS Manager at the tertiary referral hospital</i>	<i>66</i>
3.7.1.3	<i>Interview with the IIMS Manager at another hospital within the metropolitan AHS</i>	<i>67</i>
3.7.1.4	<i>Interview with the IIMS Manager at another AHS</i>	<i>68</i>
3.7.1.5	<i>Interview with stakeholders external to AHS</i>	<i>68</i>
3.7.2	Log-file analysis of IIMS training database	68
3.7.3	Observations of IIMS Training Programs	70
3.7.3.1	<i>Observation of video training for notifiers</i>	<i>70</i>
3.7.3.2	<i>Observation of face-to-face training for notifiers and for managers</i>	<i>70</i>
3.7.3.3	<i>Observation of web-based training</i>	<i>71</i>
3.8	Phase Two Data Collection	72
3.8.1	Questionnaire Development	72

3.8.1.1	<i>Background to the development of a purpose-built questionnaire</i>	72
3.8.1.2	<i>The Questionnaire</i>	73
3.8.1.3	<i>Inclusion Criterion and Exclusion Criteria</i>	75
3.8.1.4	<i>Sample Size for Questionnaire</i>	75
3.8.2	Examination of CCGR's formative evaluation of IIMS	77
3.8.3	Interviews with non-participants of web-based IIMS training	78
3.9	Data Quality	79
3.10	Conclusion	80
CHAPTER FOUR:	RESULTS	81
4.1	Introduction	81
4.2	Informal Interviews	81
4.2.1	Interview with Director of Clinical Governance at the metropolitan AHS	81
4.2.2	Interviews with managers of IIMS	83
4.2.3	Interview with senior staff member of an external Consulting Group	86
4.3	Observations of IIMS Training Programs	87
4.3.1	Observation of Web-based IIMS training	87
4.3.1.1	<i>Criteria 1 - Content</i>	89
4.3.1.2	<i>Criteria 2 - Instructional Design</i>	98
4.3.1.3	<i>Criteria 3 – Interactivity</i>	99
4.3.1.4	<i>Criteria 4 – Navigation</i>	99
4.3.1.5	<i>Criteria 5 - Motivational Components</i>	101
4.3.1.6	<i>Criteria 6 - Use of Media</i>	101
4.3.1.7	<i>Criteria 7 – Evaluation of learning</i>	101
4.3.1.8	<i>Criteria 8 – Aesthetics</i>	102
4.3.1.9	<i>Criteria 9 - Record Keeping</i>	103
4.3.1.10	<i>Criteria 10 – Tone</i>	103
4.3.2	Observation of training on Video	104
4.3.3	Observation of Face-to-face training programs	105
4.3.3.1	<i>Face-to-face training for Notifiers of incidents</i>	105
4.3.3.2	<i>Face-to-face training for managers of incidents on IIMS</i>	107
4.4	Log-file Analysis of IIMS Training Data	111
4.5	Users' Experience of Web-based IIMS Training	115
4.5.1	Demographic Data	117
4.5.1.1	<i>Professional Background</i>	118
4.5.1.2	<i>Gender</i>	119
4.5.1.3	<i>Area of Work and Years in healthcare</i>	120
4.5.1.4	<i>Age</i>	121
4.5.2	IIMS Training Method	121
4.5.2.1	<i>Form of training attended</i>	122
4.5.2.2	<i>Training most useful to notify incidents on IIMS</i>	123
4.5.3	Web-based IIMS training technology	124
4.5.4	Web-based IIMS Training Objectives	126

4.5.5 Web-based IIMS Training Contents	127
4.5.6 Reaction to web-based IIMS Training	128
4.5.7 Incident reporting pattern after training	129
4.5.8 Overall Rating of web-based IIMS training	131
4.5.9 Further Analysis of responses to Questionnaire Items	133
4.5.9.1 <i>Type of training attended by gender of respondents</i>	133
4.5.9.2 <i>Type of training attended by age of respondents</i>	134
4.5.9.3 <i>Training most useful to notify incidents by age of respondents</i>	135
4.5.9.4 <i>Training most useful to notify incidents by gender of respondents</i>	136
4.5.9.5 <i>Training most useful to notify incidents by professional background of respondents</i>	137
4.5.9.6 <i>Reporting of incidents on IIMS after training by professional background</i>	139
4.5.9.7 <i>Incident reporting pattern after training by professional background</i>	140
4.6 Interviews with Non-Participants of Web-based IIMS Training	141
4.7 Summary of results in relation to aims of this study	145
4.8 Conclusion	147
CHAPTER FIVE: DISCUSSION	148
5.1 Introduction	148
5.2 Key Findings from the Evaluation of IIMS Training Programs	150
5.3 Key Findings from Health Professionals' Experience of Web-based IIMS Training	156
5.4 Limitations of this Study	162
5.5 Recommendations	163
5.6 Conclusion	165
BIBLIOGRAPHY	168
APPENDICES	185
Appendix 1 - AHS Ethics Approval	185
Appendix 2 - UTS Ethics Approval	186
Appendix 3 - Questionnaire	187
Appendix 4 - Evaluation of IIMS in NSW Study No 2: Review of Education and Training Program	189

LIST OF TABLES

Table 2.1: Notable inquiries of incidents	18
Table 2.2: Some international web-based training programs in incident reporting in healthcare.....	37
Table 4.1: All sections and sub-sections in web-based IIMS training	91
Table 4.2: Log-file analysis of IIMS training by sections and sub-sections listed alphabetically. Training was undertaken in two locations within one AHS.....	113
Table 4.3: Participants' demographic and work characteristics	117
Table 4.4: Composition of professional representation – comparison of IIMS web-based training survey with CCGR's survey and Australian Health Workforce ...	118
Table 4.5: SPSS chi-square test output for professional background based on unequal distribution of health workforce	119
Table 4.6: SPSS chi-square test output for gender, based on unequal distribution of health workforce	120
Table 4.7: Participants' responses on IIMS Training Method	121
Table 4.8: Form of IIMS training attended - Comparison with CCGR IIMS survey	123
Table 4.9: Participants' responses on web-based IIMS training technology	125
Table 4.10: Participants' responses on web-based IIMS training objectives	126
Table 4.11: Participants' responses on web-based IIMS training contents.....	127
Table 4.12: Participants' reaction to web-based IIMS training	128
Table 4.13: Participants' responses to whether they reported incidents on IIMS after training	129
Table 4.14: Participants' responses to notification of incidents after training....	130
Table 4.15: Patterns of reporting after training - Comparison with CCGR IIMS survey	131
Table 4.16: Overall rating of web-based IIMS training.....	132

Table 4.17: Interview data from interviews with non-participants of web-based
IIMS training 142

LIST OF FIGURES

Figure 3.1: Exploratory and Descriptive Research Design – Triangulation of qualitative data followed by quantitative data collection	57
Figure 3.2: Review of IIMS training programs using Triangulation followed by Questionnaire Development and administration	64
Figure 4.1: IIMS web-based training icon on the Intranet of a metropolitan AHS	89
Figure 4.2: Welcome screen and major sections within the Main menu	90
Figure 4.3: Help screen that prompts the trainee	92
Figure 4.4: Quality dimensions explained	93
Figure 4.5: Five-step process in IIMS	94
Figure 4.6: Sub-sections in the Incident Management Section.....	94
Figure 4.7: Example of simulation	95
Figure 4.8: A sample incident data analysis	96
Figure 4.9: Steps in workflow explained	97
Figure 4.10: Lesson review at the conclusion of each section.....	98
Figure 4.11: ‘Menu’ and ‘Topics’ button at the base of the training screen.....	100
Figure 4.12: Practice exercises and skills assessment section	102
Figure 4.13: Flow diagram of Health Professionals (HPs) sample and resulting study participants	115
Figure 4.14: Type of training attended as indicated by health professionals who undertook web-based IIMS training.....	122
Figure 4.15: Forms of training most useful to notify incidents on IIMS	124
Figure 4.16: Incident reporting pattern after training.....	130
Figure 4.17: Overall rating of web-based IIMS training.....	132

Figure 4.18: Type of training attended by gender of respondents	133
Figure 4.19: Type of training attended by age of respondents	134
Figure 4.20: Training most useful to notify incidents by age of respondents	135
Figure 4.21: Training most useful to notify incidents by gender of respondents	136
Figure 4.22: Training most useful to notify incidents by professional background of respondents	137
Figure 4.23: Reporting of incidents on IIMS after training by professional background.....	139
Figure 4.24: Incident reporting pattern by professional background	140

ABBREVIATIONS

ACSQHC	Australian Commission for Safety and Quality in Health Care
AHS	Area Health Service
AIHW	Australian Institute of Health and Welfare
AIMS	Australian Incident Monitoring Study
CCGR	Centre for Clinical Governance Research in Health at University of NSW
CD-ROM	Compact Disc Read Only Memory
CEC	Clinical Excellence Commission
CGU	Clinical Governance Unit
DVD	Digital Versatile Disc
HCCC	Health Care Complaints Commission
HPs	Health Professionals
IIMS	Incident Information Management System. Electronic system used to record all healthcare incidents in NSW
IPSEL	Introduction to Patient Safety E-Learning
ISQuA	International Society for Quality Assurance in Health Care
NPSA	National Patient Safety Agency
NSW	New South Wales
NSW Health	The NSW health system
PHOs	Public Health Organisations

PSCQP	Patient Safety and Clinical Quality Program
QAHCS	Quality in Australian Health Care Study
RIB	Reportable Incident Brief
SAC	Severity Assessment Codes
SIP	Safety Improvement Program
UTCCRS	University of Texas Close Call Reporting System
www	World wide web

GLOSSARY OF TERMS

Adverse Event	Unintended patient injury or complication from treatment that results in disability, death or prolonged hospital stay and is caused by health care management rather than by the patient's underlying disease or condition.
Asynchronous web-based training	Asynchronous web-based training allows for the learner to log on to the course to complete the lesson or training at the learner's own pace and at a time convenient to the learner. There is no learner-instructor interaction.
Blended learning	This training approach includes a combination of web-based training, face-to-face workshops, individual and group activities as appropriate to the training program delivered.
Clinical Governance Units	Established within Area Health Services in New South Wales to oversee the implementation of the NSW Patient Safety and Clinical Quality Programs.
Computer Simulation	Computer simulation (or sim) is an attempt to model a real-life or hypothetical situation on a computer so that it can be studied to see how the system works. Simulation embodies the principle of 'learning by doing'.
Disclosure	Providing information to a patient or family about an incident.
E-learning	Covers a wide set of applications and processes such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via internet, intranet/extranet, audio-and videotape, satellite broadcast, interactive Television and CD-ROM.
Error or Medical Error	Failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.
Evaluation	The systematic examination of a policy, program or project aimed at assessing the merit, value, worth, relevance or contribution.

Formative Evaluation	Evaluation conducted during a course of a policy's, program's or project's life.
Healthcare	Services that are provided to individuals or communities to promote, maintain, monitor, or restore health.
Incident	An unplanned event resulting in, or with the potential for, injury, damage or other loss.
Inquiry	Systematic investigation often of a matter of public interest. In the case of healthcare incidents, 'inquiry' is a systematic investigation of the events that have occurred prior to and during an incident.
Learning organisation	An organisation that continually expands its capacity to create the results it truly desires.
Log-file analysis	Involves scrutiny of the frequency and time of use of web-based training via an assessment of all logged usage.
Near miss	Any event that could have had adverse consequences but did not and is indistinguishable from an actual accident in all but outcome.
Notifier	Any member of staff of the NSW health system who enters information into IIMS of an incident or near miss.
Organisational culture	The collective set of relationships in organisations that differentiate one group from another in terms of dress, attitudes, values, behaviours, beliefs, language and shared meaning.
Preventable adverse event	An injury or complication that results from an error or systems failure.
Reporting	The process of entering or documenting data about an incident or near miss for any of the incident categories into IIMS.
Synchronous web-based training	Synchronous web-based training is instantaneous and allows for learner-instructor interaction via the web for eg. on-line discussions.

Triangulation	A multi-method research or evaluation design which adduces converging or diverging evidence drawn from pluralist sources to illuminate an object of inquiry.
Unpreventable adverse event	An injury that was not due to an error or systems failure and is not always preventable.
Utilisation-focused evaluation	Carefully considers how everything is done, from beginning to end and how this will affect use. The focus is on intended use by intended users.
Web-based IIMS training	Online training program that describes what IIMS is and explains the role of staff in using IIMS as part of improving safety in NSW Health.
Web-based training	Communication of information over the World Wide Web with the intent of providing instruction.
Whistleblowing	Voluntary release of non-public information (as a moral protest) to an appropriate audience about illegal and/or immoral conduct in an organisation.